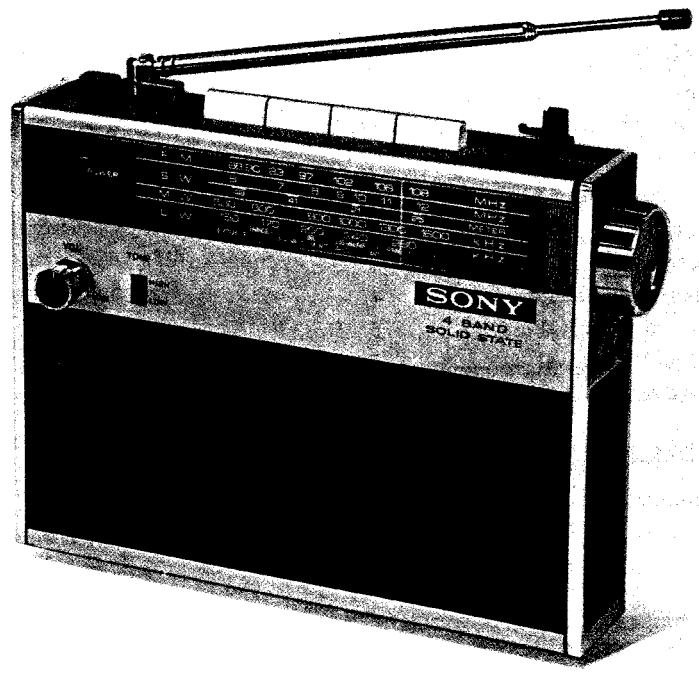
5F-94DL



SPECIFICATIONS

Circuit System: 10-transistor 5-diode superheterodyne

Frequency Coverage:
FM 87.5～108 MHz (3.43～2.78 m)
SW 5.9～12 MHz (50.8～25 m)
MW 530～1,605 kHz (566～187 m)
LW 150～285 kHz (2,000～1,053 m)

Intermediate Frequency:
FM 10.7 MHz
SW, MW, LW 455 kHz

Antenna System:
FM, SW built-in telescopic antenna
MW, LW built-in ferrite bar antenna

Sensitivity:
FM 6μV (13dB) at Signal-to-Noise ratio 30dB
SW 4μV (12dB) at Signal-to-Noise ratio 6dB
MW 100μV/m (40dB/m) at Signal-to-Noise ratio 6dB
LW 104μV/m (43dB/m) at Signal-to-Noise ratio 6dB

Selectivity
at ±10 kHz off-resonance: 28 dB at 1,400 kHz

Power Output
at 10% distortion: 630 mW
maximum: 910 mW

Current Drain
at zero signal: FM 23 mA
SW, MW, LW 20 mA

Power Requirement: Three "C" size flashlight batteries 4.5 V in total or
ac power source by using SONY AC 90E adaptor

Speaker: 2½" x 4" (65 mm x 100 mm), PM dynamic 8Ω

Dimensions: 5½" (H) x 7⅛" (W) x 2⅛" (D) (139 mm x 181 mm x 53 mm)

Weight: 2.2 lb (950 g)

SONY®
SERVICE MANUAL

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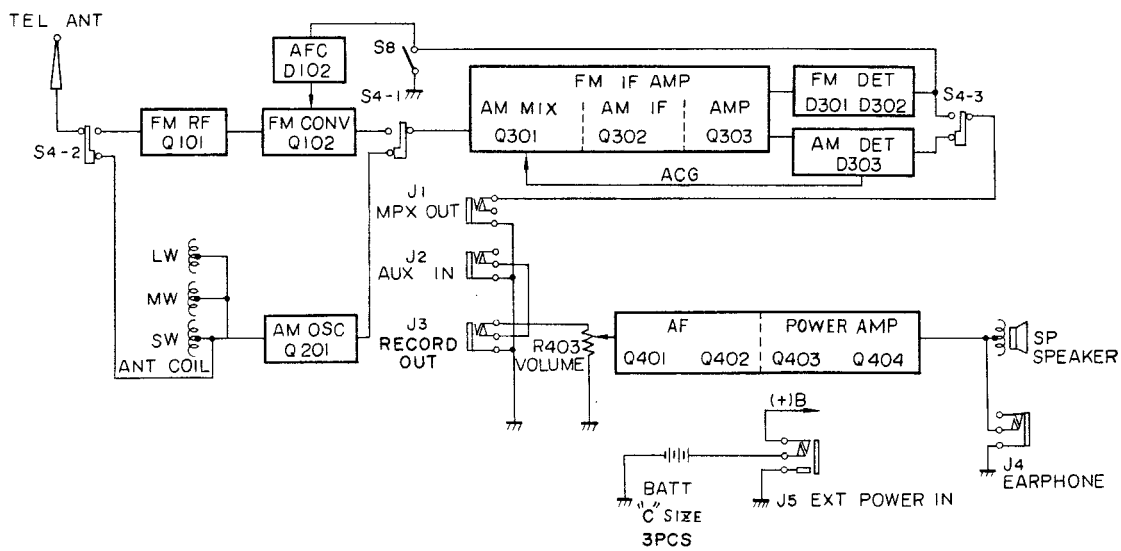
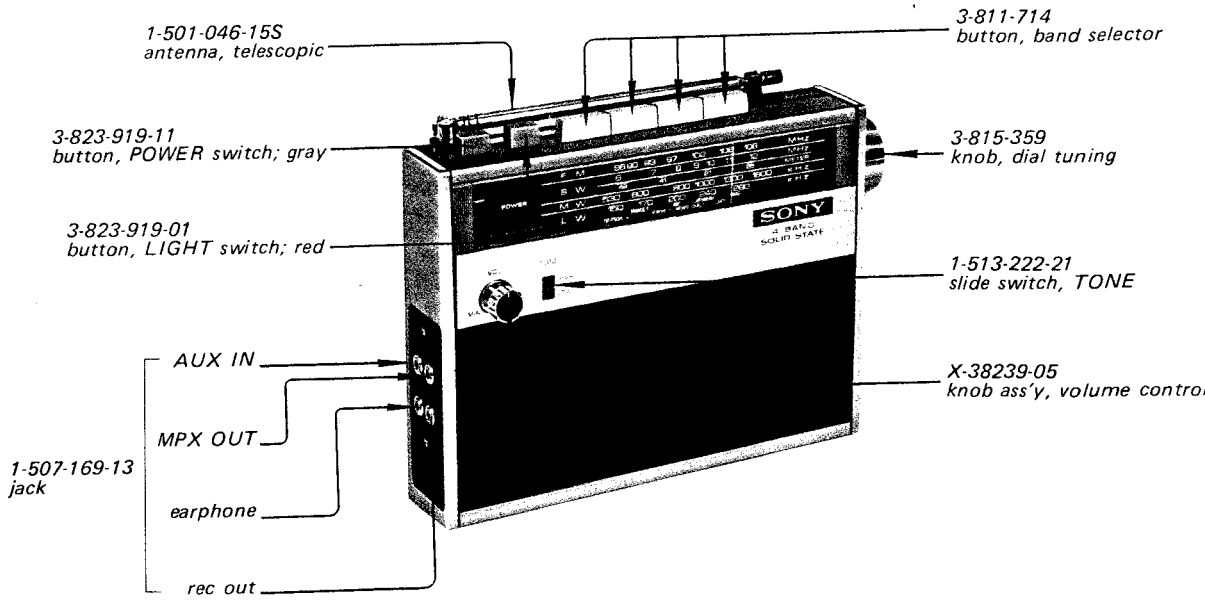
SECTION 1
OUTLINE

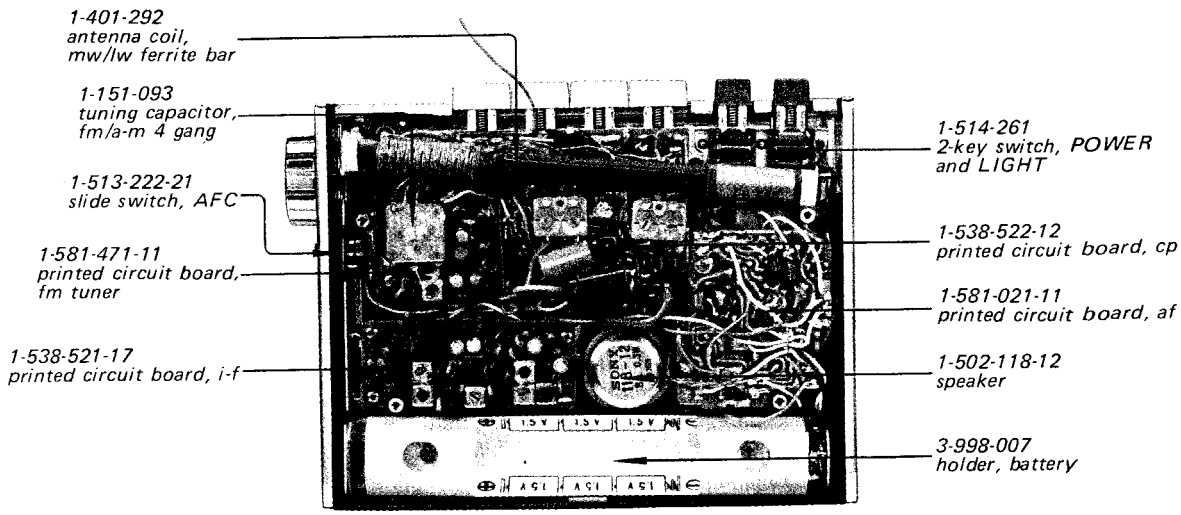
1-1. BLOCK DIAGRAM



1-2. EXTERNAL VIEW



1-3. INTERNAL VIEW



SECTION 2
DISASSEMBLY

2-1. CHASSIS REMOVAL

1. Remove the four screws shown in Fig. 2-1.
2. Remove the rear cabinet.
3. Pull out the two knobs (VOL, tuning) and remove the screw shown in Fig. 2-2.

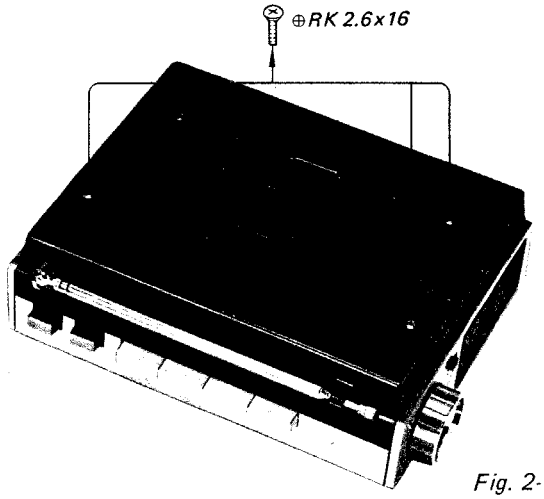


Fig. 2-1

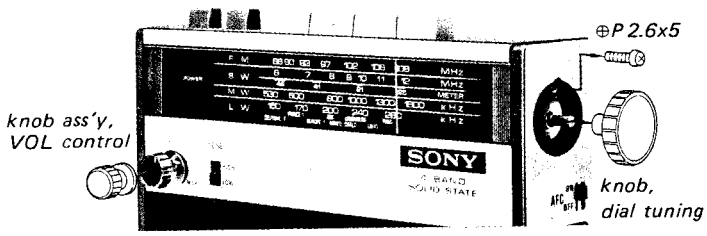


Fig. 2-2

4. Remove the three screws shown in Fig. 2-3.
5. Unsolder the four lead wires shown in Fig. 2-3.
6. Remove the chassis in the direction shown by the arrow.

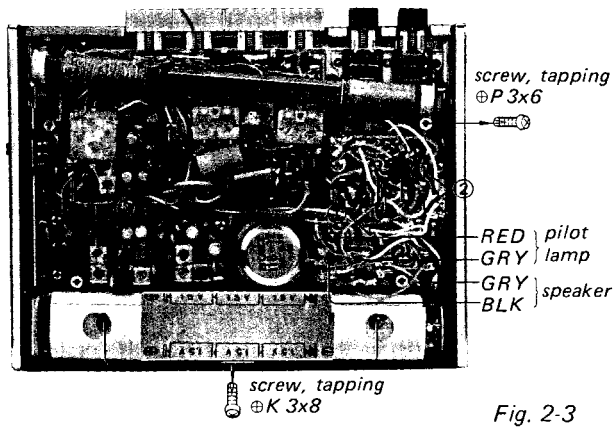


Fig. 2-3

2-2. FM TUNER REMOVAL

1. Remove the rear cabinet.
2. Unsolder the two lead wires and the three tuning capacitor legs marked ※ in Fig. 2-4.
3. Remove the screw shown in Fig. 2-4.
4. Remove the fm tuner in the direction shown by the arrow.

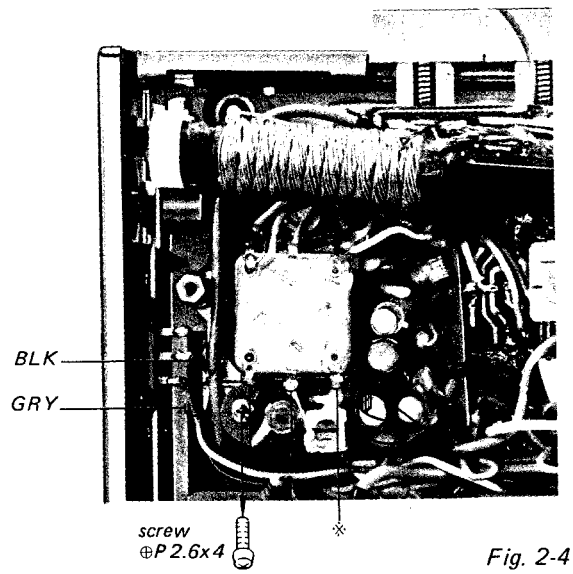


Fig. 2-4

2-3. IF CIRCUIT BOARD REMOVAL

1. Remove the rear cabinet.
2. Remove the three screws and remove the circuit board in the direction shown by the arrow in Fig. 2-5.

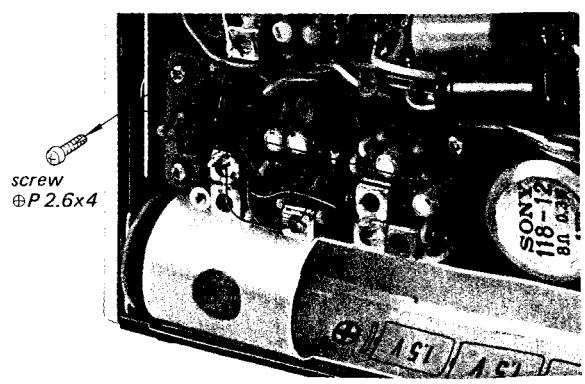


Fig. 2-5

2-4. AF CIRCUIT BOARD REMOVAL

1. Remove the rear cabinet.
2. Unsolder the six lead wires shown in Fig. 2-6.
3. Remove the two screws shown in Fig. 2-6.
4. Remove the lead wires from the wire holder.
5. Unsolder the soldered portion marked ※ and remove the circuit board.

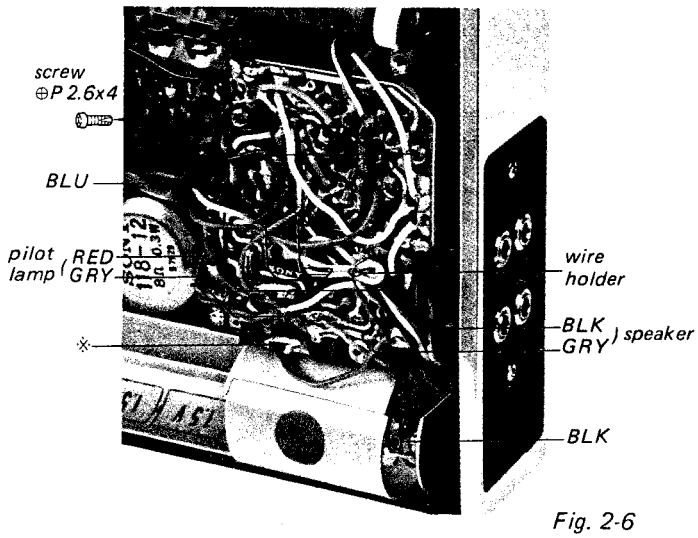


Fig. 2-6

2-5. CP CIRCUIT BOARD REMOVAL

1. Remove the rear cabinet.
2. Remove the two screws shown in Fig. 2-7 and bar antenna.
3. Remove the tuner circuit board.

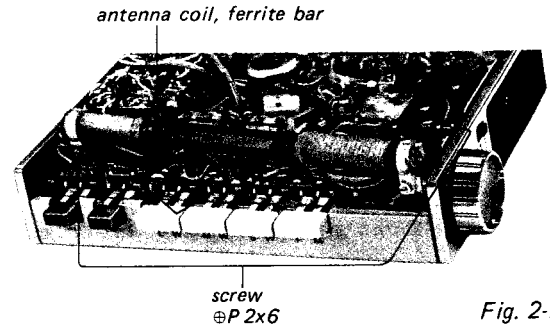


Fig. 2-7

4. Remove the two screws and unsolder the four lead wires shown in Fig. 2-8.
5. Remove the circuit board.

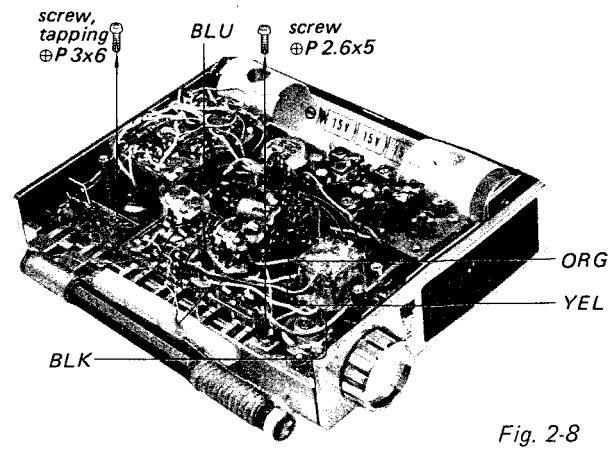
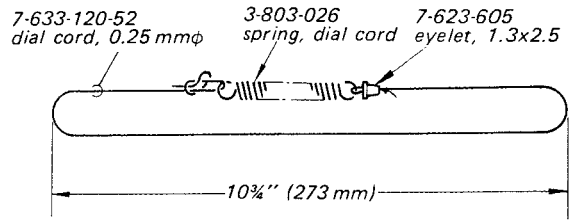


Fig. 2-8

2-6. DIAL CORD STRINGING

1. Remove the fm tuner and the cp circuit board.
2. Cut the dial cord and make a loop as shown in Fig. 2-9.
3. String the dial cord in the numerical order.
4. Rotate the dial tuning gear of the tuning capacitor fully counterclockwise as shown in Fig. 2-10 and attach the gear to the dial drum.



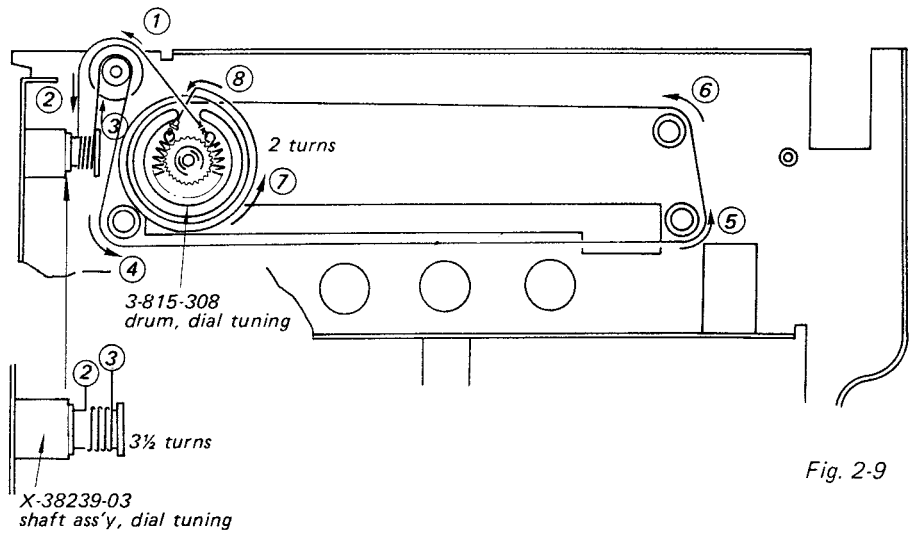


Fig. 2-9

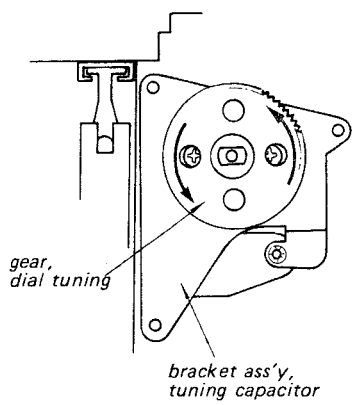


Fig. 2-10

Pointer Setting

1. Rotate the tuning shaft fully counterclockwise.
2. Set the pointer at the pointer setting position shown in Fig. 2-11.

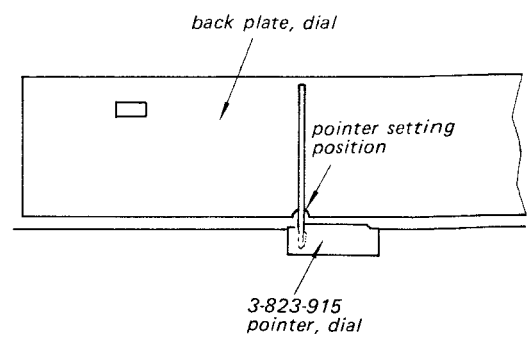


Fig. 2-11

SECTION 3
CIRCUIT ADJUSTMENTS

3-1. AM IF ALIGNMENT

Test Equipments/Tools Required: Rf signal generator (for a-m)
VTVM
Loop antenna
8Ω resistor
Screwdriver for alignment

Rf Signal Generator Coupling	Rf Signal Generator Frequency	VTVM Connection	Adjust	Remarks
Loop antenna (See Fig. 3-1.)	455 kHz (1 kHz 30% a-m)	earphone jack with 8Ω load resistor in parallel	IFT A201 IFT A202	Band selector: MW VOL control: fully clockwise position Tuning knob: fully clockwise position Adjust for maximum meter reading.

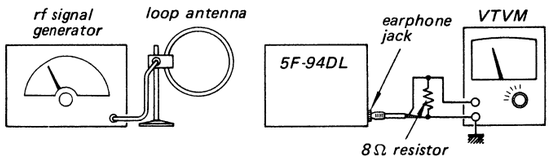


Fig. 3-1 A-m i-f alignment, frequency coverage and tracking adjustment setup

Preparation:

Oscilloscope Connection:
To af circuit board, resistor R414
(See Fig. 3-4)
Sweep/Marker Generator Connection:
Across the tuning capacitor (See Fig. 3-3)
Sweep generator Center Frequency: 10.7 MHz
Marker Generator Frequency: 10.7 MHz
VOL Control Setting: fully counterclockwise position
Band Selector Setting: FM

3-2. FM IF ALIGNMENT

Test Equipments/Tools Required:

Sweep generator with 10.7 MHz marker generator
0.01 μF ceramic capacitor
Oscilloscope
Screwdriver for alignment

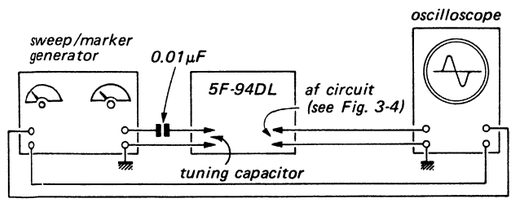


Fig. 3-2 FM i-f alignment setup

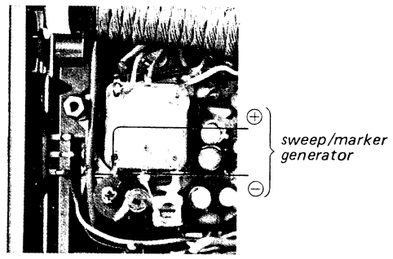


Fig. 3-3 Sweep generator connection

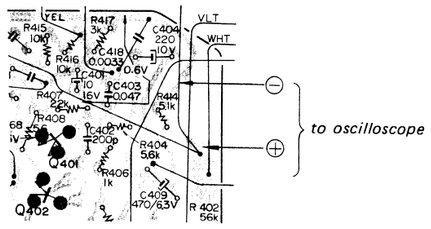


Fig. 3-4 Oscilloscope connection

Procedure:

1. Turn the core of IFT F304 fully counterclockwise.
2. Turn the core of IFT F101, IFT F301, IFT F302 and IFT F303 to obtain the maximum amplitude response curve on the scope shown in Fig. 3-5.
3. Turn the core of IFT F304 to obtain the symmetrical "S" curve shown in Fig. 3-6.

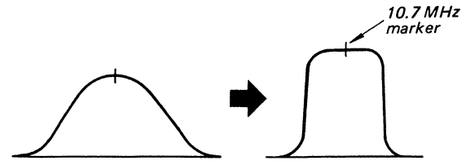


Fig. 3-5 Response curve

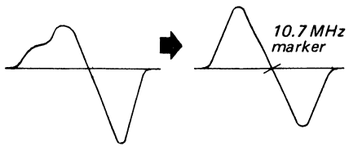


Fig. 3-6 "S" curve

Sweep/Marker Generator Coupling	Sweep/Marker Generator Frequency	Oscilloscope Connection	Adjust	Remarks
Tuning capacitor (See Fig. 3-3.)	10.7 MHz	R414 (See Fig. 3-4.)	IFT F101 IFT F301 IFT F302 IFT F303 IFT F304	Band selector: FM Adjust for maximum amplitude and symmetrical "S" curve on the scope.

3-3. FREQUENCY COVERAGE AND TRACKING ADJUSTMENT

Test Equipments/Tools Required: Rf signal generator (for fm and a-m)
Loop antenna
VTVM
8Ω resistor
Screwdriver for alignment

Preparation: VTVM Connection: To earphone jack with 8Ω resistor in parallel (See Fig. 3-1.)
Modulation: FM – 400 Hz ±22.5 kHz frequency-modulated signal
AM – 400 Hz 30% amplitude-modulated signal
VOL Control Setting: MAX (fully clockwise position)
TONE Control Setting: HIGH
AFC Switch: OFF

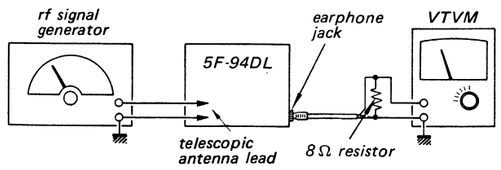


Fig. 3-7 FM frequency coverage and tracking adjustment setup

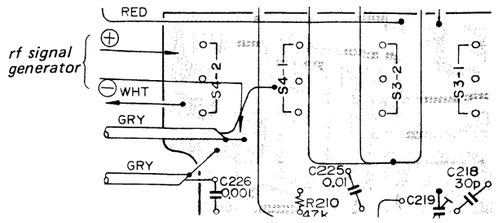


Fig. 3-8 Rf signal generator connection

Adjustment	Rf Signal Generator Coupling	Rf Signal Generator Frequency	Receiver Dial Setting	Adjust	Remarks
FM Frequency Coverage	Telescopic antenna lead	85.5 MHz	Fully left	FM osc coil L104	Band Selector: FM Adjust for maximum meter reading.
		109.5 MHz	Fully right	FM osc trimmer C1-4	
FM Tracking		85.5 MHz	Tune to 85.5 MHz signal	FM rf coil L102	
		109.5 MHz	Tune to 109.5 MHz signal	FM ant trimmer C1-3	
SW Frequency Coverage	Telescopic antenna lead	5.75 MHz	Fully left	SW osc coil L206	Band Selector: SW Adjust for maximum meter reading.
		12.6 MHz	Fully right	SW osc trimmer C219	
SW Tracking		5.75 MHz	Tune to 5.75 MHz signal	SW ant coil L203	
		12.6 MHz	Tune to 12.6 MHz signal	SW ant trimmer C204	
MW Frequency Coverage	Loop antenna	520 kHz	Fully left	MW osc coil L205	Band Selector: MW Adjust for maximum meter reading.
		1,680 kHz	Fully right	MW osc trimmer C217	
MW Tracking		620 kHz	Tune to 620 kHz signal	MW ant coil L202	
		1,400 kHz	Tune to 1,400 kHz signal	MW ant trimmer C207	
LW Frequency Coverage	– ditto –	145 kHz	Fully left	LW osc coil L204	Band Selector: LW Adjust for maximum meter reading.
		300 kHz	Fully right	LW osc trimmer C214	
LW Tracking		160 kHz	Tune to 160 kHz signal	LW ant coil L201	
		280 kHz	Tune to 280 kHz signal	LW ant trimmer C227	

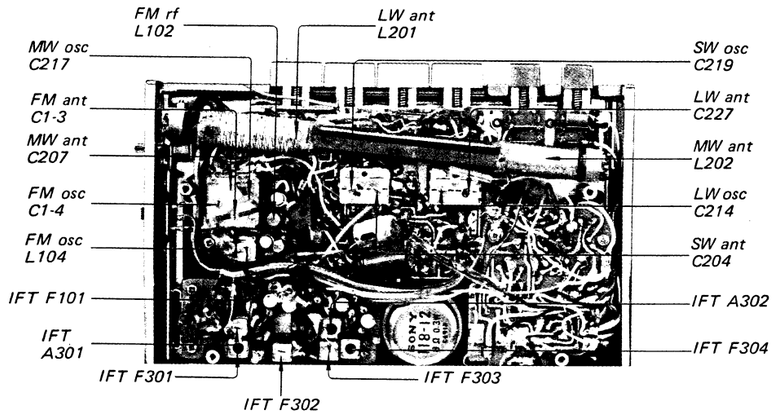


Fig. 3-9 Adjusting parts location (1)

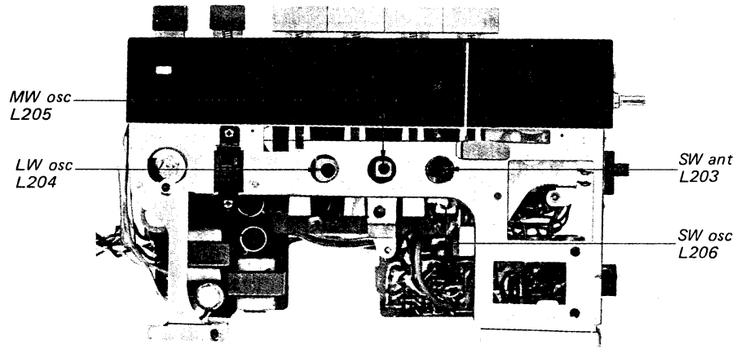


Fig. 3-10 Adjusting parts location (2)

Note: An extra lead wire is located on the af circuit board to cancel the harmonic-leakage which is produced from the loop conductor and induced on the bar antenna. Check the lead wire when an oscillation noise is heard at LW reception.

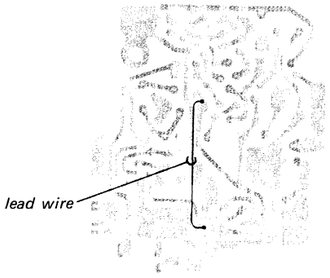
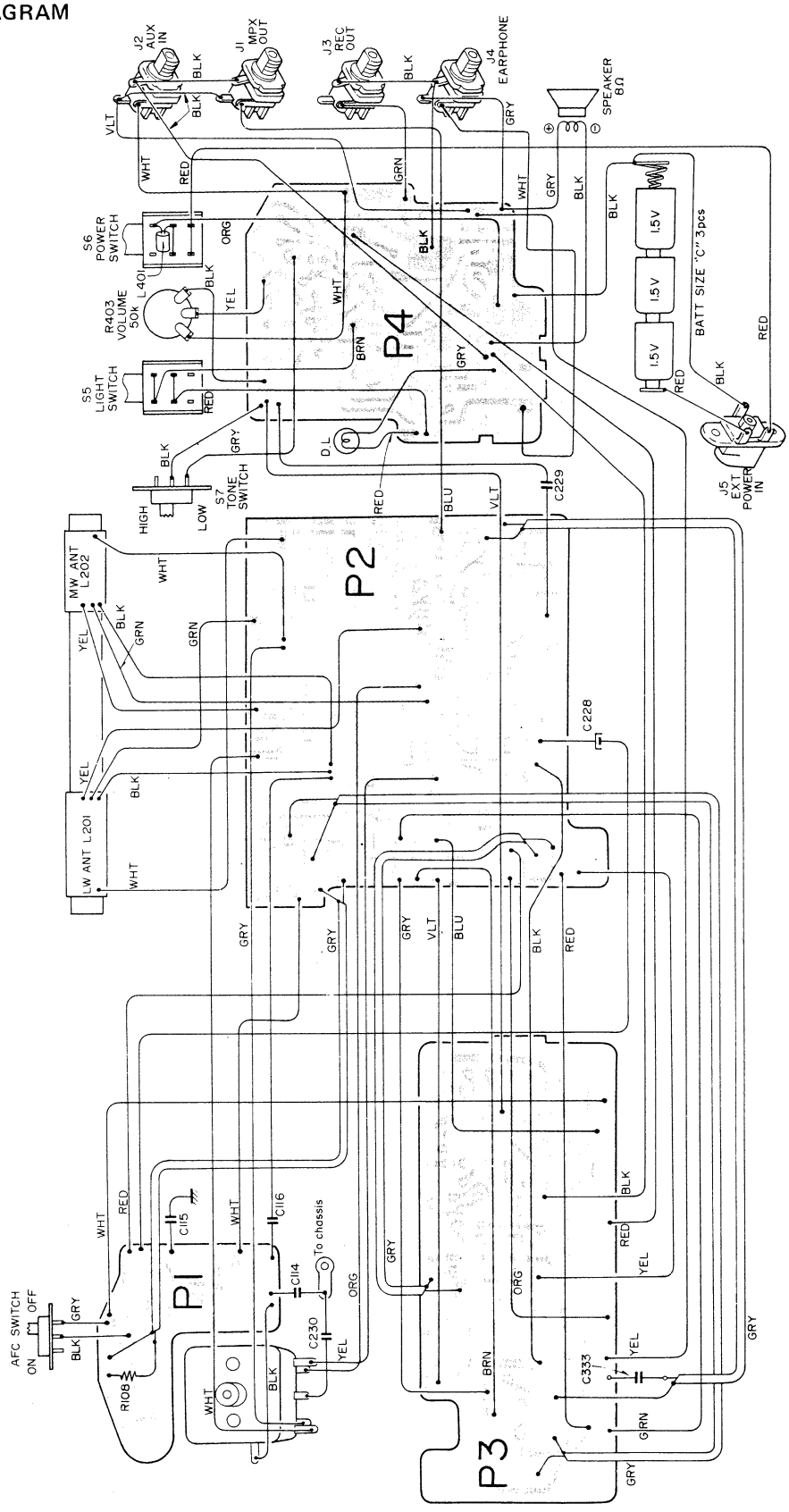


Fig. 3-11

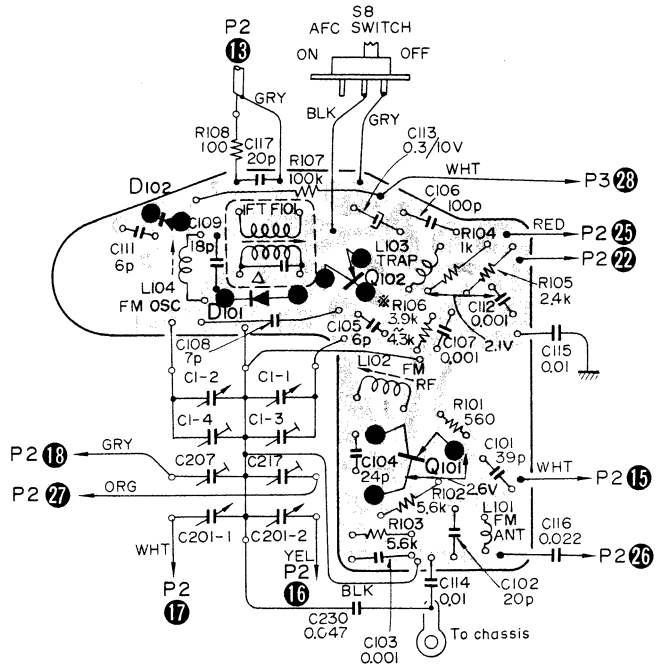
SECTION 4
MOUNTING AND SCHEMATIC DIAGRAMS

4-1. WIRING DIAGRAM

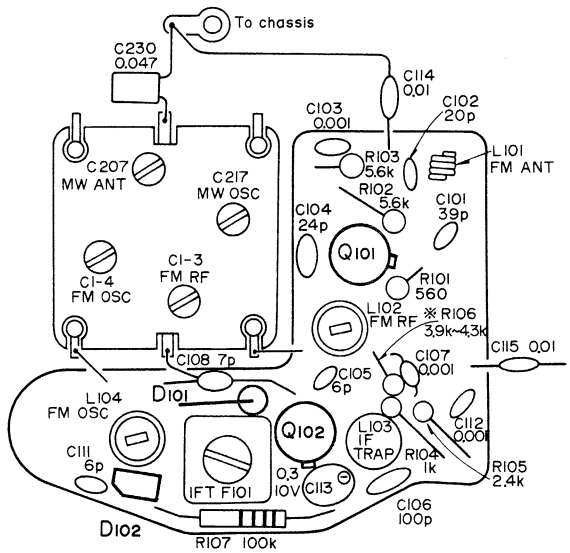


4-2. FM TUNER CIRCUIT BOARD (P1)

– Conductor Side –



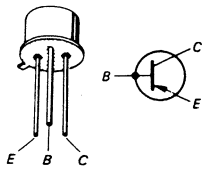
– Component Side –



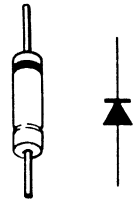
Note:

1. Printed circuit board, Part No. 1-581-471-11
2. The following parts are mounted on the conductor side; C109 and C117.

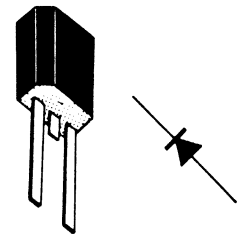
Q101 : 2SA455
Q102 : 2SA454



D101 : 1T26

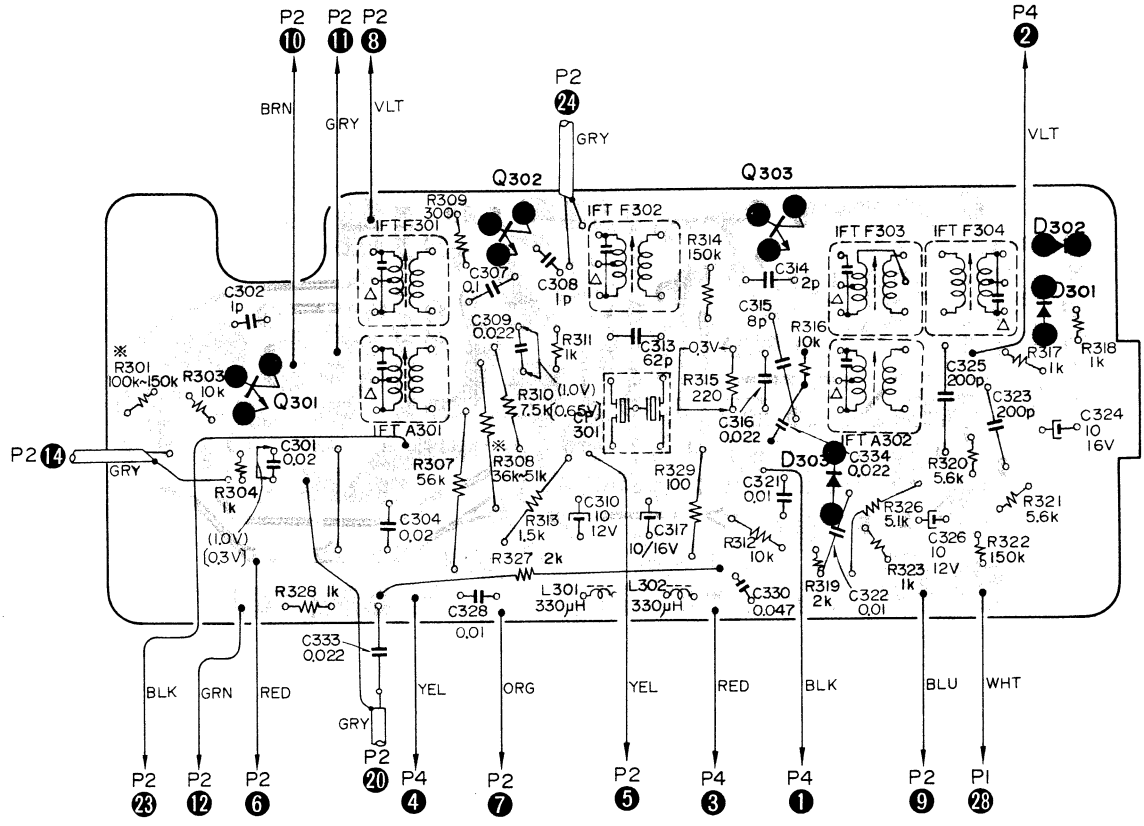


D102 : 1T240

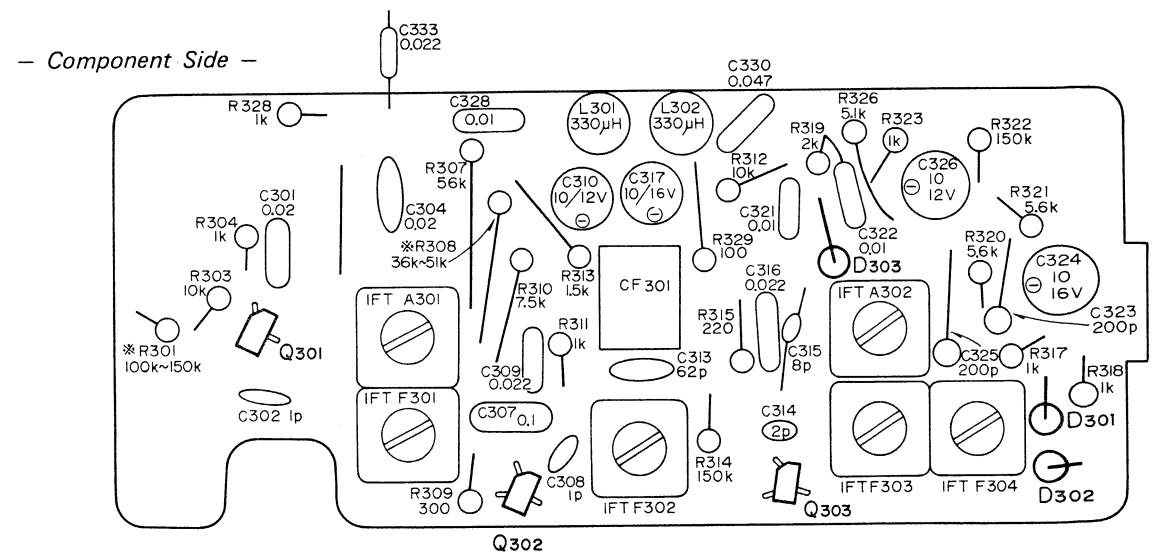


4-3. IF CIRCUIT BOARD (P3)

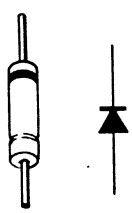
– Conductor Side –



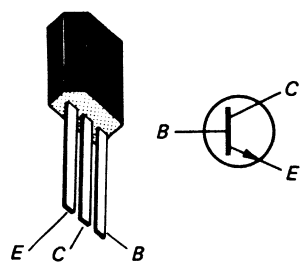
– Component Side –



D301, D302 : 1T26
D303 : 1T23



Q301 ~ Q303 : 2SC403A

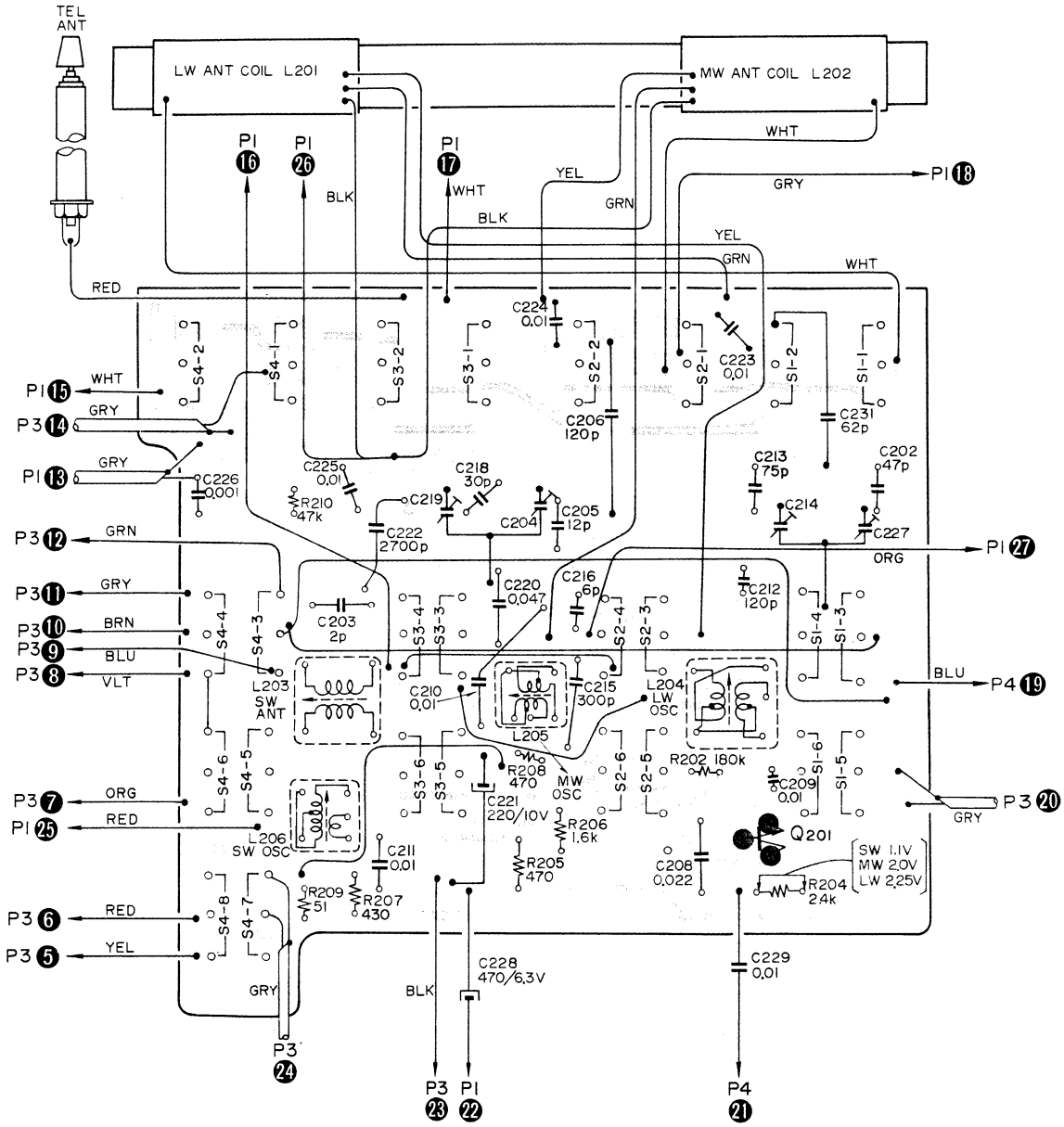


Note:

1. Printed circuit board, Part No. 1-538-521-17
2. The following parts are mounted on the conductor side; C334 and R316.

4-4. CP CIRCUIT BOARD (P2)

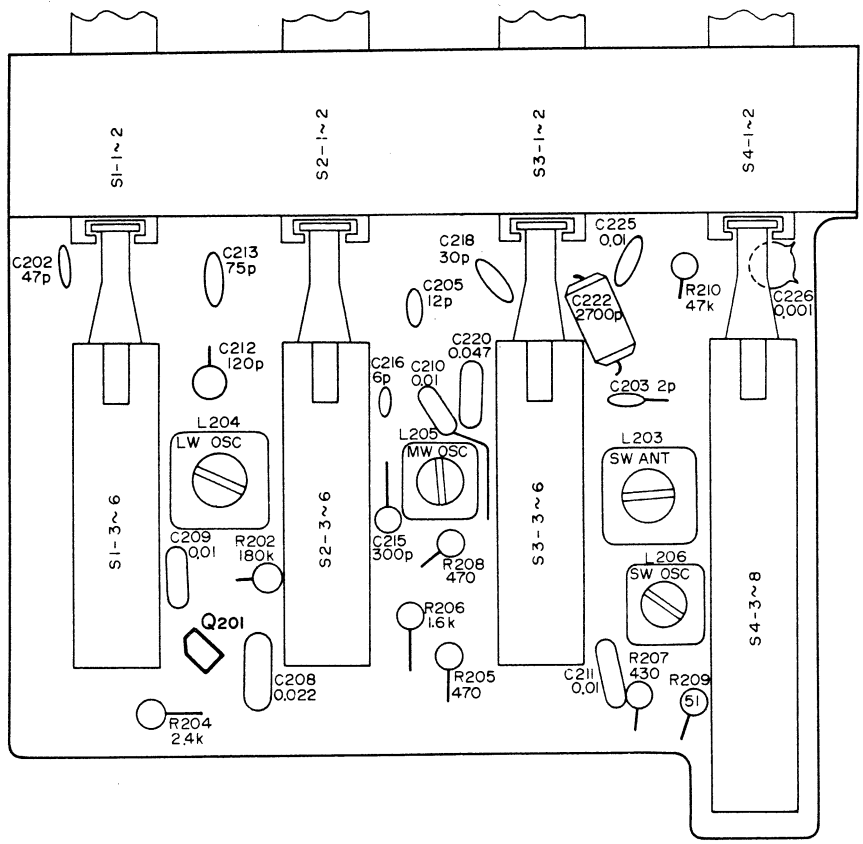
— Conductor Side —



Note:

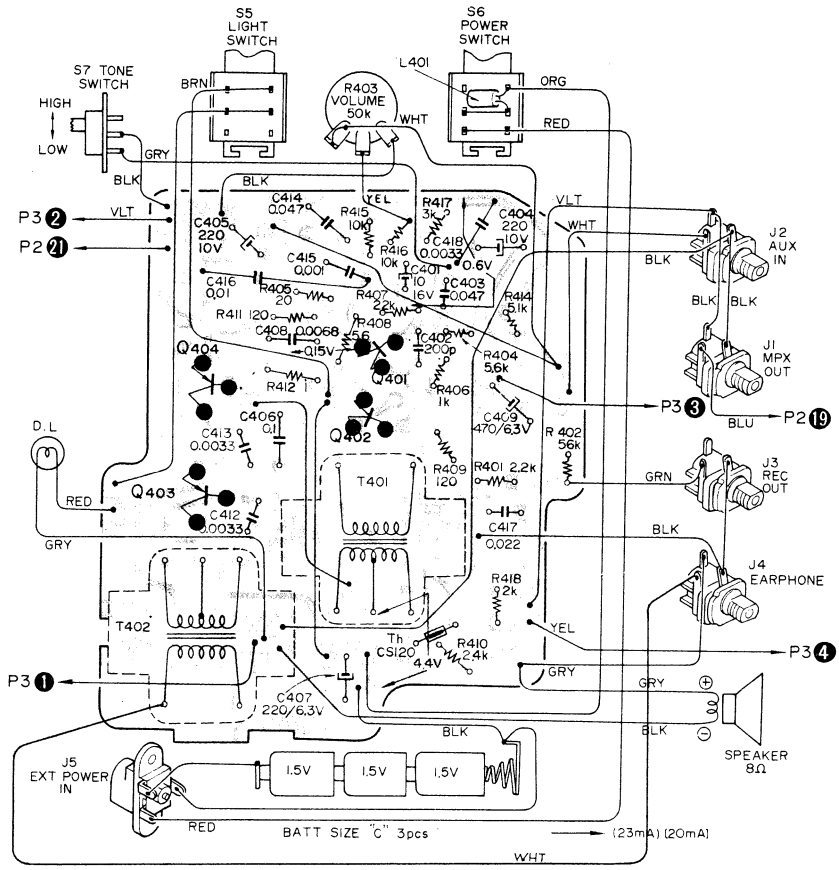
1. Printed circuit board, Part No. 1-538-522-12
2. The following parts are mounted on the conductor side; C206, C221, C223, C224, C228, C229, C231, two-gang trimmers (C204, C219) and (C214, C227).

— Component Side —



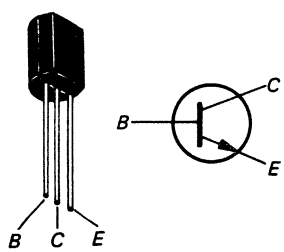
4-5. AF CIRCUIT BOARD (P4)

– Conductor Side –

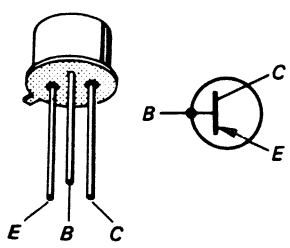


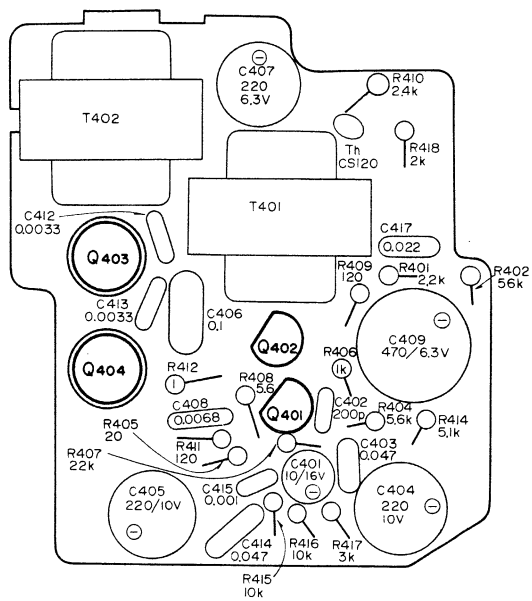
– Component Side –

Q401, Q402 : 2SC870



Q403, Q404 : 2SB379B

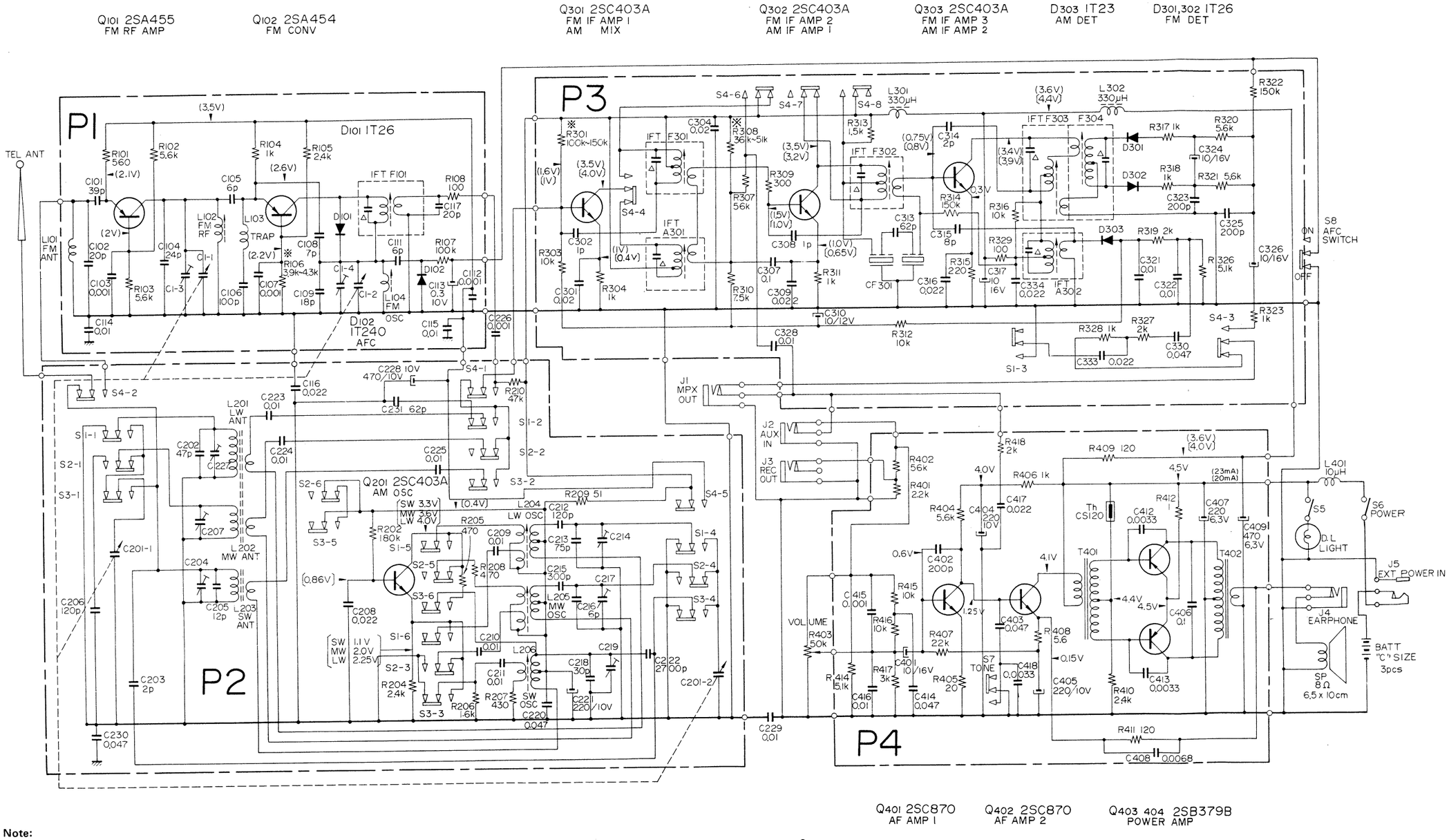




Note:

1. Printed circuit board, Part No. 1-581-021-11
2. The following parts are mounted on the conductor side; C416 and C418.

4-6. SCHEMATIC DIAGRAM



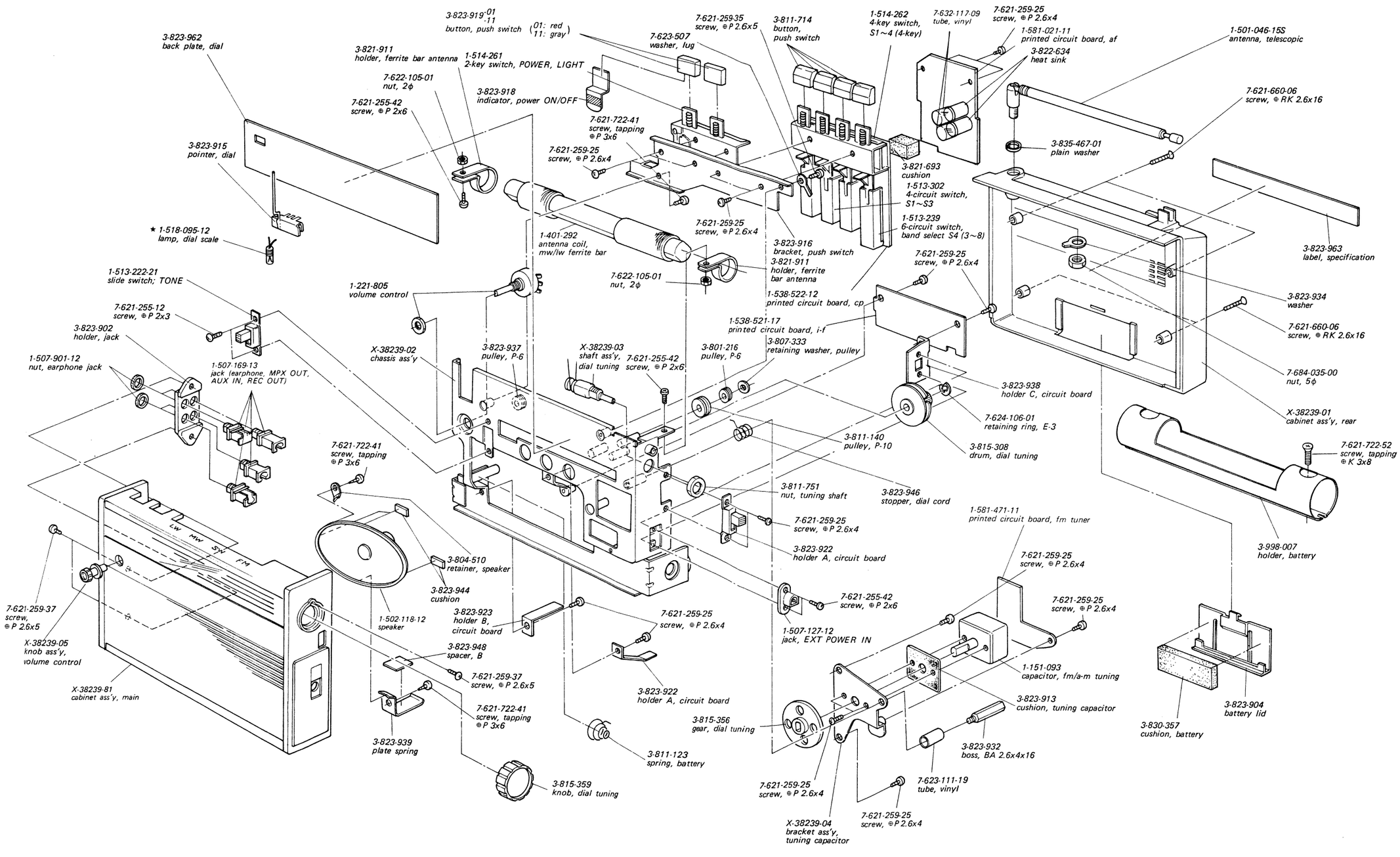
Note:

1. ⏚ shows grounding to chassis.
2. All resistors and capacitors are in Ω and μF, unless otherwise indicated.
3. Capacitor marked △ is built in i-f transformer.
4. The symbol ※ indicates a component whose value is selected to yield specified operating condition:
   (1) R106 is to be selected to obtain 0.85±0.05V across R104.
   (2) R301 is to be selected to obtain 0.4±0.05V at the emitter of Q301 with band selector AM.
   (3) R308 is to be selected to obtain 0.62±0.05V at the emitter of Q302 with band selector AM.
5. Voltage value is measured to ground circuit with a dc voltmeter (20kΩ/V) and current value is measured with a dc ammeter. Voltage and current are taken with no radio signal received and the values shown in ( ) with band selector set to FM and in [ ] with SW, MW and LW. Variations may be noted due to normal production tolerances.
6.

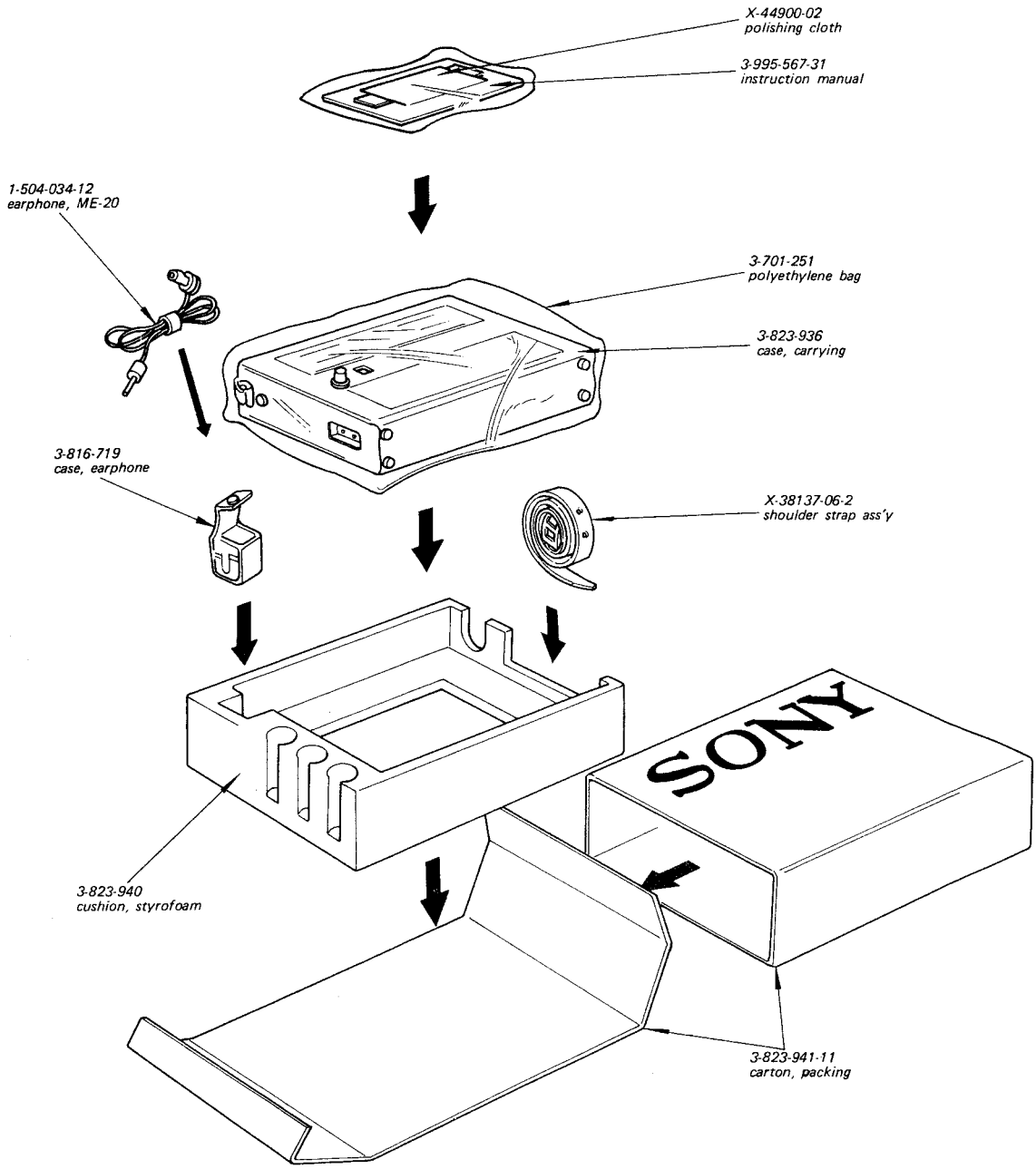
Switch	Function	Position	Switch	Function	Position
S1	Band Selector (LW)	off	S5	LIGHT	off
S2	Band Selector (MW)	on	S6	POWER	off
S3	Band Selector (SW)	off	S7	TONE	LOW
S4	Band Selector (FM)	off	S8	AFC	off

SECTION 5
EXPLODED VIEW AND PACKING

5-1. EXPLODED VIEW


3-823-962 back plate, dial
3-823-915 pointer, dial
★ 1-518-095-12 lamp, dial scale
3-823-919-01 -11 button, push switch (01: red 11: gray)
3-821-911 holder, ferrite bar antenna
1-514-261 2-key switch, POWER, LIGHT
7-622-105-01 nut, 2φ
7-621-255-42 screw, ⊕P 2x6
3-823-918 indicator, power ON/OFF
7-621-722-41 screw, tapping ⊕P 3x6
7-621-259-25 screw, ⊕P 2.6x4
7-623-507 washer, lug
7-621-259-35 screw, ⊕P 2.6x5
3-811-714 button, push switch
1-514-262 4-key switch, S1~4 (4-key)
7-632-117-09 tube, vinyl
7-621-259-25 screw, ⊕P 2.6x4
1-581-021-11 printed circuit board, af
3-822-634 heat sink
1-501-046-15S antenna, telescopic
7-621-660-06 screw, ⊕RK 2.6x16
3-835-467-01 plain washer
3-821-693 cushion
1-513-302 4-circuit switch, S1~S3
1-513-239 6-circuit switch, band select S4 (3~8)
3-823-963 label, specification
3-823-916 bracket, push switch
3-821-911 holder, ferrite bar antenna
1-401-292 antenna coil, mw/lw ferrite bar
7-622-105-01 nut, 2φ
7-621-259-25 screw, ⊕P 2.6x4
1-538-522-12 printed circuit board, cp
1-538-521-17 printed circuit board, i-f
3-807-333 retaining washer, pulley
1-513-222-21 slide switch; TONE
1-221-805 volume control
7-621-255-12 screw, ⊕P 2x3
3-823-902 holder, jack
1-507-901-12 nut, earphone jack
1-507-169-13 jack (earphone, MPX OUT, AUX IN, REC OUT)
X-38239-02 chassis ass'y
3-823-937 pulley, P-6
X-38239-03 shaft ass'y, dial tuning
7-621-255-42 screw, ⊕P 2x6
3-801-216 pulley, P-6
3-823-934 washer
7-621-660-06 screw, ⊕RK 2.6x16
7-684-035-00 nut, 5φ
X-38239-01 cabinet ass'y, rear
3-823-938 holder C, circuit board
7-624-106-01 retaining ring, E-3
3-815-308 drum, dial tuning
3-811-140 pulley, P-10
7-621-722-52 screw, tapping ⊕K 3x8
3-998-007 holder, battery
3-811-751 nut, tuning shaft
3-823-946 stopper, dial cord
7-621-259-25 screw, ⊕P 2.6x4
1-581-471-11 printed circuit board, fm tuner
3-823-922 holder A, circuit board
7-621-259-25 screw, ⊕P 2.6x4
7-621-255-42 screw, ⊕P 2x6
1-507-127-12 jack, EXT POWER IN
7-621-259-25 screw, ⊕P 2.6x4
1-151-093 capacitor, fm/a-m tuning
3-823-913 cushion, tuning capacitor
3-823-932 boss, BA 2.6x4x16
3-823-904 battery lid
3-830-357 cushion, battery
7-621-722-41 screw, tapping ⊕P 3x6
3-804-510 retainer, speaker
3-823-944 cushion
1-502-118-12 speaker
3-823-923 holder B, circuit board
3-823-948 spacer, B
7-621-259-37 screw, ⊕P 2.6x5
X-38239-05 knob ass'y, volume control
X-38239-81 cabinet ass'y, main
3-823-939 plate spring
7-621-722-41 screw, tapping ⊕P 3x6
7-621-259-25 screw, ⊕P 2.6x4
3-823-922 holder A, circuit board
3-811-123 spring, battery
3-815-359 knob, dial tuning
3-815-356 gear, dial tuning
7-621-259-25 screw, ⊕P 2.6x4
X-38239-04 bracket ass'y, tuning capacitor
7-621-259-25 screw, ⊕P 2.6x4
7-623-111-19 tube, vinyl
LW MW SW FM

5-2. PACKING


X-44900-02
polishing cloth
3-995-567-31
instruction manual
1-504-034-12
earphone, ME-20
3-701-251
polyethylene bag
3-823-936
case, carrying
3-816-719
case, earphone
X-38137-06-2
shoulder strap ass'y
SONY
3-823-940
cushion, styrofoam
3-823-941-11
carton, packing

SECTION 6
ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description
		SEMICONDUCTORS
Q101		transistor 2SA455
Q102		transistor 2SA454
Q201		transistor 2SC403A
Q301		transistor 2SC403A
Q302		transistor 2SC403A
Q303		transistor 2SC403A
Q401		transistor 2SC870
Q402		transistor 2SC870
Q403		transistor 2SB379B
Q404		transistor 2SB379B
D101		diode 1T26
D102		diode 1T240
D301		diode 1T26
D302		diode 1T26
D303		diode 1T23
Th		thermistor CS-120
		COILS AND TRANSFORMERS
L101	1-401-228	antenna coil, fm
L102	1-405-257	rf coil, fm
L103	1-407-101-12	trap coil, micro inductor 2.2μH
L104	1-405-257	osc coil, fm
L201, L202	1-401-292	antenna coil, mw/lw ferrite bar
L203	1-401-262	antenna coil, sw
L204	1-405-269	osc coil, lw
L205	1-405-268	osc coil, mw
L206	1-405-270	osc coil, sw
L301	1-407-175	micro inductor, 330μH
L302	1-407-175	micro inductor, 330μH
L401	1-407-157	micro inductor, 10μH
IFT F101	1-403-242-15	transformer, fm i-f
IFT F301	1-403-243-15	transformer, fm i-f
IFT F302	1-403-244-15	transformer, fm i-f
IFT F303	1-403-272-15	discriminator, fm i-f
IFT F304	1-403-273-15	discriminator, fm i-f
IFT A301	1-403-126	transformer, a-m i-f
IFT A302	1-403-152	transformer, a-m i-f
CF 301	1-403-153	ceramic filter
T401	1-423-072	transformer, dirver
T402	1-427-232	transformer, output
		CAPACITORS
C1-1, C1-4, C201-1, C201-2	1-151-093	tuning capacitor, fm/a-m 4-gang

Ref. No.	Part No.	Description
C101	1-101-876	39pF ceramic
C102	1-101-864	20pF ceramic
C103	1-101-918	0.001μF ceramic
C104	1-101-867	24pF ceramic
C105	1-101-956	6pF ceramic
C106	1-101-896	100pF ceramic
C107	1-101-918	0.001μF ceramic
C108	1-101-957	7pF ceramic
C109	1-101-862	18pF ceramic
C110		– discarded –
C111	1-101-956	6pF ceramic
C112	1-101-918	0.001μF ceramic
C113	1-127-021	0.3μF 10V electrolytic (alox)
C114	1-101-141	0.01μF ceramic
C115	1-101-141	0.01μF ceramic
C116	1-105-413-12	0.022μF mylar
C117	1-101-864	20pF ceramic
C201		– discarded –
C202	1-101-880	47pF ceramic
C203	1-101-952	2pF ceramic
C204, C219	1-141-127-12	2-gang trimmer, sw (C204: ant, C219: osc
C205	1-101-961	12pF ceramic
C206	1-103-603	120pF styrol
C207, C217		trimmer, mw (included in tuning capacitor) (C207: ant, C217: osc
C208	1-105-837-12	0.022μF mylar
C209	1-105-833-12	0.01μF mylar
C210	1-105-833-12	0.01μF mylar
C211	1-105-833-12	0.01μF mylar
C212	1-103-603	120pF styrol
C213	1-101-890	75pF ceramic
C214, C227	1-141-127-12	2-gang trimmer, lw (C214: ant, C227: osc
C215	1-103-612	300pF styrol
C216	1-101-956	6pF ceramic
C218	1-101-871	30pF ceramic
C220	1-105-841-12	0.047μF mylar
C221	1-121-155	220μF 10V electrolytic
C222	1-103-635	2,700pF styrol
C223	1-101-141	0.01μF ceramic
C224	1-101-141	0.01μF ceramic
C225	1-101-141	0.01μF ceramic
C226	1-101-918	0.001μF ceramic
C228	1-121-222	470μF 10V electrolytic
C229	1-101-141	0.01μF ceramic
C230	1-105-841-12	0.047μF mylar
C231	1-101-886	62pF ceramic
C301	1-101-906	0.02μF ceramic
C302	1-101-951	1pF ceramic
C303		– discarded –
C304	1-101-906	0.02μF ceramic
C305		– discarded –

Ref. No.	Part No.	Description
C306		– discarded –
C307	1-101-797	0.1μF ceramic
C308	1-101-951	1pF ceramic
C309	1-105-837-12	0.022μF mylar
C310	1-121-471	10μF 16V electrolytic
C311		– discarded –
C312		– discarded –
C313	1-101-886	62pF ceramic
C314	1-101-952	2pF ceramic
C315	1-101-958	8pF ceramic
C316	1-105-837-12	0.022μF mylar
C317	1-121-471	10μF 16V electrolytic
C318		– discarded –
C319		– discarded –
C320		– discarded –
C321	1-105-833-12	0.01μF mylar
C322	1-105-833-12	0.01μF mylar
C323	1-103-608	200pF styrol
C324	1-121-471	10μF 16V electrolytic
C325	1-103-608	200pF styrol
C326	1-121-471	10μF 16V electrolytic
C327		– discarded –
C328	1-105-833-12	0.01μF mylar
C329		– discarded –
C330	1-105-841-12	0.047μF mylar
C331		– discarded –
C332		– discarded –
C333	1-105-837-12	0.022μF mylar
C334	1-105-837-12	0.022μF mylar
C401	1-121-471	10μF 16V electrolytic
C402	1-107-138	200pF silvered mica
C403	1-105-841-12	0.047μF mylar
C404	1-121-155	220μF 10V electrolytic
C405	1-121-155	220μF 10V electrolytic
C406	1-105-845-12	0.1μF mylar
C407	1-121-155	220μF 6.3V electrolytic
C408	1-105-831-12	0.0068μF mylar
C409	1-121-222	470μF 10V electrolytic
C410		– discarded –
C411		– discarded –
C412	1-105-827-12	0.0033μF mylar
C413	1-105-827-12	0.0033μF mylar
C414	1-105-841-12	0.047μF mylar
C415	1-105-821-12	0.001μF mylar
C416	1-105-833-12	0.01μF mylar
C417	1-105-837-12	0.022μF mylar
C418	1-105-827-12	0.0033μF mylar

RESISTORS

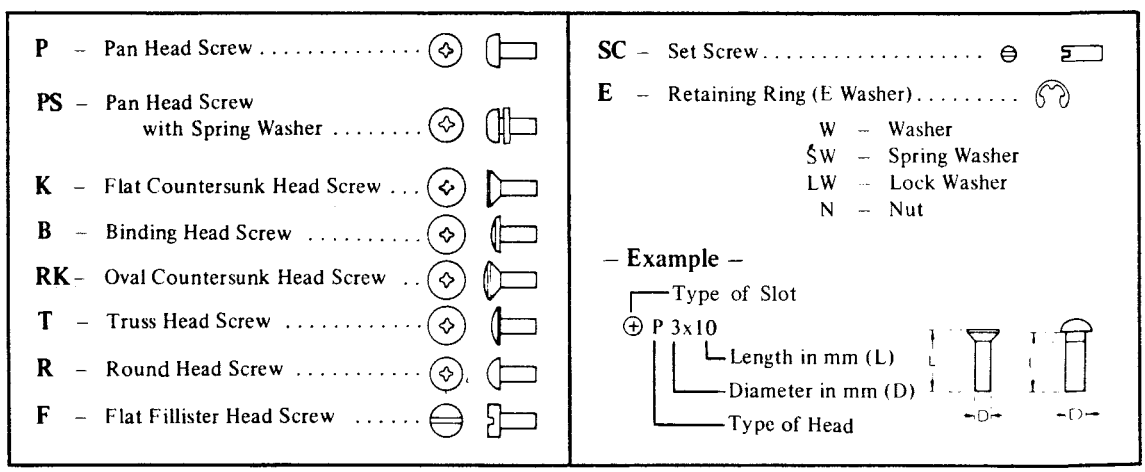
All resistors are ¼W 5% carbon resistors unless otherwise noted.

R101	1-201-872	560Ω	⅛W	composition
R102	1-201-864	5.6kΩ	⅛W	composition
R103	1-201-864	5.6kΩ	⅛W	composition
R104	1-201-862	1kΩ	⅛W	composition
R105	1-201-828	2.4kΩ	⅛W	composition
※ R106	1-202-019	3.9kΩ	⅛W	composition
	1-201-871	4.3kΩ	⅛W	composition
R107	1-201-868	100kΩ	⅛W	composition
R108	1-244-449	100Ω	⅛W	carbon
R201		– discarded –		
R202	1-244-727	180kΩ		
R203		– discarded –		
R204	1-244-682	2.4kΩ		
R205	1-244-665	470Ω		
R206	1-244-678	1.6kΩ		
R207	1-244-664	430Ω		
R208	1-244-665	470Ω		
R209	1-244-642	51Ω		
R210	1-244-713	47kΩ		
※ R301	1-244-721	100kΩ		
	1-244-722	110kΩ		
	1-244-723	120kΩ		
	1-244-724	130kΩ		
	1-244-725	150kΩ		
R302		– discarded –		
R303	1-244-697	10kΩ		
R304	1-244-673	1kΩ		
R305		– discarded –		
R306		– discarded –		
R307	1-244-715	56kΩ		
※ R308	1-244-710	36kΩ		
	1-244-711	39kΩ		
	1-244-712	43kΩ		
	1-244-713	47kΩ		
	1-244-714	51kΩ		
R309	1-244-697	300Ω		
R310	1-244-694	7.5kΩ		
R311	1-244-673	1kΩ		
R312	1-244-697	10kΩ		
R313	1-244-677	1.5kΩ		
R314	1-244-725	150kΩ		
R315	1-244-657	220Ω		
R316	1-244-697	10kΩ		
R317	1-244-673	1kΩ		
R318	1-244-673	1kΩ		
R319	1-244-680	2kΩ		
R320	1-244-691	5.6kΩ		
R321	1-244-691	5.6kΩ		
R322	1-244-725	150kΩ		
R323	1-244-673	1kΩ		
R324		– discarded –		
R325		– discarded –		
R326	1-244-690	5.1kΩ		
R327	1-244-680	2kΩ		
R328	1-244-673	1kΩ		

Note: The symbol ※ indicates a component whose value is selected to yield specified operating conditions.

Ref. No.	Part No.	Description	
R329	1-244-649	100Ω	
R401	1-244-681	2.2kΩ	
R402	1-244-715	56kΩ	
R403	1-222-805-21	50kΩ	variable, volume control
R404	1-244-691	5.6kΩ	
R405	1-244-632	20Ω	
R406	1-244-637	1kΩ	
R407	1-244-705	22kΩ	
R408	1-244-619	5.6Ω	
R409	1-244-651	120Ω	
R410	1-244-682	2.4kΩ	
R411	1-244-651	120Ω	
R412	1-244-601	1Ω	
R413		– discarded –	
R414	1-244-690	5.1kΩ	
R415	1-244-697	10kΩ	
R416	1-244-697	10kΩ	
R417	1-244-684	3kΩ	
R418	1-244-680	2kΩ	
	MISCELLANEOUS		
	1-581-471-11	printed circuit board, fm tuner	
	1-538-522-12	printed circuit board, cp	
	1-538-521-17	printed circuit board, i-f	
	1-581-021-11	printed circuit board, af	
TEL ANT	1-501-046-15S	antenna, telescopic	
SP	1-502-118-12	speaker, 8Ω	
DL	1-518-095-12	lamp, dial scale	
J1	1-507-169-13	jack, MPX OUT	
J2	1-507-169-13	jack, AUX IN	
J3	1-507-169-13	jack, rec out	
J4	1-507-169-13	jack, earphone	
J5	1-507-127-12	jack, EXT POWER IN	
	1-507-901-12	nut, jack	
S1 (1-2)～S4 (1-2)	1-514-262	4-key switch, band select	
S1 (3-6)～S3 (3-6)	1-513-302	4-circuit switch, band select	
S4 (3-8)	1-513-239	6-circuit switch, band select	
S5, S6	1-514-261	switch, LIGHT (S5) and POWER (S6)	
S7	1-513-222-21	switch, TONE	
S8	1-513-222-21	switch, AFC	

—— Hardware Nomenclature ——


P – Pan Head Screw
PS – Pan Head Screw with Spring Washer
K – Flat Countersunk Head Screw
B – Binding Head Screw
RK – Oval Countersunk Head Screw
T – Truss Head Screw
R – Round Head Screw
F – Flat Fillister Head Screw
SC – Set Screw
E – Retaining Ring (E Washer)
W – Washer
SW – Spring Washer
LW – Lock Washer
N – Nut
– Example –
Type of Slot
P 3x10
Length in mm (L)
Diameter in mm (D)
Type of Head
L
D

When ordering replacement parts, you should use PART NUMBER listed on the Parts List or shown in the EXPLODED VIEW. The reference number should not be used for ordering purposes.

SONY CORPORATION

SONY®

ARCHIVEXEMPLAR

Complete Spare Parts List

Model 5F-94DL

"IMPORTANT"

When ordering parts, please do not fail to furnish us the following:

1. Part Number
2. Model Name
3. Description as mentioned in this parts list

We are now using EDPS (Electronic Data Processing System) in all the departments concerned, for procurement, inventory control, packing, warehousing, etc. Your orders are processed mainly from the PART NUMBERS referred by you. Incorrect part numbers, therefore, will result in incorrect parts shipment. To assure prompt shipment of correct parts, your cooperation will be appreciated.

NOTE:

Prices are subject to change without notice.

SONY CORPORATION

COMPLETE SPARE PARTS LIST FOR 5F-94DL

OCTOBER, 1970

Part No.	Description	Unit Price
	A. MECHANICAL PARTS	
X-38239-01	Cabinet Ass'y, rear	$0.25
X-38239-02	Chassis Ass'y	0.72
X-38239-03	Shaft Ass'y, dial tuning	0.12
X-38239-04	Bracket Ass'y, tuning capacitor	0.03
X-38239-05	Knob Ass'y, volume control	0.06
X-38239-07	Lid Ass'y, battery	0.04
X-38239-81	Cabinet Ass'y, main	1.35
0-240-220	Cushion	0.02
3-801-216	Pulley, P-6	0.01
3-803-026	Spring, dial cord	0.01
3-804-510	Retainer, speaker	0.01
3-807-333	Retaining Washer, pulley	0.01
3-811-123	Spring, battery	0.03
3-811-140	Pulley, P-10	0.01
3-811-714	Button, band selector	0.02
3-811-751	Nut, bearing	0.01
3-835-467-01	Plane Washer	0.02
3-815-308	Drum, dial tuning	0.03
3-815-356	Gear, dial tuning	0.03
3-815-359	Knob, dial tuning	0.09
3-815-380	Stopper	0.01
3-821-693	Cushion	0.01
3-821-911	Holder, ferrite bar antenna	0.02
3-822-634	Heat Sink	0.04
3-823-351	Spacer A	0.01
3-823-902	Holder, jack	0.04
3-823-913	Cushion, tuning capacitor	0.01
3-823-915	Pointer, dial	0.06
3-823-916	Bracket, push switch	0.03
3-823-918	Indicator, POWER on/off	0.02
3-823-910-01	Button, LIGHT switch; red	0.01
3-823-910-11	Button, POWER switch; gray	0.01
3-823-922	Holder A	0.01
3-823-923	Holder B	0.01
3-823-932	Boss, BA 2.6 x 4 x 16	0.02
3-823-934	Washer	0.01

Part No.	Description	Unit Price
3-823-937	Pulley, P-6	$0.01
3-823-938	Holder C, circuit board	0.03
3-823-939	Plate Spring	0.02
3-823-940	Cushion, styrol foam	0.08
3-823-944	Cushion	0.01
3-823-946	Stopper, dial cord	0.03
3-823-947	Spacer, fiber	0.01
3-823-948	Spacer B	0.01
3-823-962	Back Plate, dial	0.07
3-823-963	Label, specification	0.09
3-998-007	Holder, battery	0.07

B. SCREWS, NUTS, WASHERS & MISCELLANEOUS (Per 100)

7-621-255-12	Screw, machine (+) P 2 x 3	0.13/100
7-621-255-42	Screw, machine (+) P 2 x 6	0.15/100
7-621-259-25	Screw, machine (+) P 2.6 x 4	0.15/100
7-621-259-37	Screw, machine (+) P 2.6 x 5	0.53/100
7-621-660-06	Screw, machine (+) RK 2.6 x 16	0.81/100
7-621-722-41	Screw, tapping (+) P 3 x 6	0.67/100
7-621-722-52	Screw, tapping (+) K 3 x 8	0.24/100
7-621-259-35	Screw, machine (+) P 2.6 x 5	0.11/100
7-621-259-12	Screw, machine (+) P 2.6 x 3	0.22/100
7-622-105-01	Nut, 2 ϕ	0.28/100
7-623-507-01	Lug, 2.6 ϕ	0.12/100
7-623-407-01	Lock Washer, 2.6 ϕ ext. tooth	0.19/100
7-623-605	Eyelet 1.3 x 2.5	0.05/100
7-624-106	Retaining Ring, E-3	0.39/100
7-633-120-52	Dial Cord, 0.25 ϕ	0.02/m
7-684-035	Nut, 5 ϕ	0.26/100

Ref. No.	Part No.	Description	Unit Price
		C. ELECTRICAL PARTS	
		Semiconductors	
Q101		Transistor, 2SA455	$0.32
Q102		Transistor, 2SA454	0.32
Q201		Transistor, 2SC403A	0.17
Q301		Transistor, 2SC403A	0.17
Q302		Transistor, 2SC403A	0.17
Q303		Transistor, 2SC403A	0.17
Q401		Transistor, 2SC870	0.12
Q402		Transistor, 2SC870	0.12
Q403		Transistor, 2SB379B	0.21
Q404		Transistor, 2SB379B	0.21
D101		Diode, 1T26	0.04
D102		Diode, 1T240	0.07
D301		Diode, 1T26	0.04
D302		Diode, 1T26	0.04
D303		Diode, 1T23	0.05
Th		Thermistor, CS-120	0.04
		Coils and Transformers	
L101	1-401-228	Antenna Coil, fm	0.02
L102	1-405-257	Rf Coil, fm	0.05
L103	1-407-101-12	Trap Coil, micro inductor 2.2 µH	0.05
L104	1-405-257	Osc. Coil, fm	0.05
L201, L202	1-401-292	Antenna Coil, mw/lw ferrite bar	0.52
L203	1-401-262	Antenna Coil, sw	0.14
L204	1-405-269	Osc. Coil, lw	0.13
L205	1-405-268	Osc. Coil, mw	0.13
L206	1-405-270	Osc. Coil, sw	0.15
L301	1-407-175	Micro Inductor, 330 µH	0.04
L302	1-407-175	Micro Inductor, 330 µH	0.04
L401	1-407-157	Micro Inductor, 10 µH	0.03
IFT F101	1-403-242-15	Transformer, fm i-f	0.13
IFT F301	1-403-243-15	Transformer, fm i-f	0.13
IFT F302	1-403-244-15	Transformer, fm i-f	0.13
IFT F303	1-403-272-15	Discriminator, fm i-f	0.13
IFT F304	1-403-273-15	Discriminator, fm i-f	0.13
IFT A301	1-403-126	Transformer, a-m i-f	0.11

Ref. No.	Part No.	Description	Unit Price
IFT A302	1-403-152	Transformer, a-m i-f	$0.11
CF 301	1-403-153	Ceramic Filter	0.19
T401	1-423-072	Transformer, driver	0.17
T402	1-427-232	Transformer, output	0.16
		Capacitors	
C1-1,1-4, C201-1, C201-2	1-151-093	Tuning Capacitor, fm/a-m 4 gang	1.27
C101	1-101-876	39 pF ceramic	0.02
C102	1-101-864	20 pF ceramic	0.02
C103	1-101-918	0.001 µF ceramic	0.02
C104	1-101-867	24 pF ceramic	0.02
C105	1-101-956	6 pF ceramic	0.02
C106	1-101-896	100 pF ceramic	0.02
C107	1-101-918	0.001 µF ceramic	0.02
C108	1-101-957	7 pF ceramic	0.02
C109	1-101-862	18 pF ceramic	0.02
C110		- discarded -	
C111	1-101-956	6 pF ceramic	0.02
C112	1-101-918	0.001 µF ceramic	0.02
C113	1-127-021	0.3 µF/10 V electrolytic (alox)	0.04
C114	1-101-141	0.01 µF ceramic	0.02
C115	1-101-141	0.01 µF ceramic	0.02
C116	1-105-413-12	0.022 µF mylar	0.02
C117	1-101-864	20 pF ceramic	0.02
C201		- discarded -	
C202	1-101-880	47 pF ceramic	0.02
C203	1-101-952	2 pF ceramic	0.02
C204,219	1-141-127-12	2-gang Trimmer, sw (C204: ant, C219: osc.)	0.12
C205	1-101-961	12 pF ceramic	0.02
C206	1-103-603	120 pF styrol	0.03
C207,217		Trimmer, mw (C207: ant, C217: osc.) (included in tuning capacitor)	
C208	1-105-837-12	0.022 µF mylar	0.02
C209	1-105-833-12	0.01 µF mylar	0.02
C210	1-105-833-12	0.01 µF mylar	0.02
C211	1-105-833-12	0.01 µF mylar	0.02
C212	1-103-603	120 pF styrol	0.03

Ref. No.	Part No.	Description		Unit Price
C213	1-101-890	75 pF	ceramic ----------	$0.02
C214,227	1-141-127-12	2-gang Trimmer, lw (C214: ant, C227: osc.)	--	0.12
C215	1-103-612	300 pF	styrol ----------	0.03
C216	1-101-956	6 pF	ceramic ----------	0.02
C218	1-101-871	30 pF	ceramic ----------	0.02
C220	1-105-841-12	0.047 µF	mylar ----------	0.02
C221	1-121-155	220 µF/10 V	electrolytic ----------	0.06
C222	1-103-635	2700 pF	styrol ----------	0.03
C223	1-101-141	0.01 µF	ceramic ----------	0.02
C224	1-101-141	0.01 µF	ceramic ----------	0.02
C225	1-101-141	0.01 µF	ceramic ----------	0.02
C226	1-101-918	0.001 µF	ceramic ----------	0.02
C228	1-121-222	470 µF/10 V	electrolytic ----------	0.11
C229	1-101-141	0.01 µF	ceramic ----------	0.02
C230	1-105-841-12	0.047 µF	mylar ----------	0.02
C231	1-101-886	62 pF	ceramic ----------	0.02
C301	1-101-906	0.02 µF	ceramic ----------	0.02
C302	1-101-951	1 pF	ceramic ----------	0.02
C303		- discarded -		
C304	1-101-906	0.02 µF	ceramic ----------	0.02
C305		- discarded -		
C306		- discarded -		
C307	1-101-797	0.1 µF	ceramic ----------	0.02
C308	1-101-951	1 pF	ceramic ----------	0.02
C309	1-105-837-12	0.022 µF	mylar ----------	0.02
C310	1-121-471	10 µF/16 V	electrolytic ----------	0.04
C311		- discarded -		
C312		- discarded -		
C313	1-101-886	62 pF	ceramic ----------	0.02
C314	1-101-952	2 pF	ceramic ----------	0.02
C315	1-101-958	8 pF	ceramic ----------	0.02
C316	1-105-837-12	0.022 µF	mylar ----------	0.02
C317	1-121-471	10 µF/16 V	electrolytic ----------	0.04
C318		- discarded -		
C319		- discarded -		
C320		- discarded -		
C321	1-105-833-12	0.01 µF	mylar ----------	0.02
C322	1-105-833-12	0.01 µF	mylar ----------	0.02
C323	1-103-608	200 pF	styrol ----------	0.03
C324	1-121-471	10 µF/16 V	electrolytic ----------	0.04
C325	1-103-608	200 pF	styrol ----------	0.03
C326	1-121-471	10 µF/16 V	electrolytic ----------	0.04

Ref. No.	Part No.	Description			Unit Price
R327		- discarded -			
R328	1-105-833-12	0.01 µF		mylar	$0.02
R329		- discarded -			
R330	1-105-841-12	0.047 µF		mylar	0.02
R331		- discarded -			
R332		- discarded -			
C333	1-105-837-12	0.022 µF		mylar	0.02
C334	1-105-837-12	0.022 µF		mylar	0.02
C401	1-121-471	10 µF/16 V		electrolytic	0.04
C402	1-107-138	200 pF		silvered mica	0.02
C403	1-105-841-12	0.047 µF		mylar	0.02
C404	1-121-155	220 µF/10 V		electrolytic	0.06
C405	1-121-155	220 µF/10 V		electrolytic	0.06
C406	1-105-845-12	0.1 µF		mylar	0.02
C407	1-121-155	220 µF/6.3 V		electrolytic	0.06
C408	1-105-831-12	0.0068 µF		mylar	0.02
C409	1-121-222	470 µF/10 V		electrolytic	0.11
C410		- discarded -			
C411		- discarded -			
C412	1-105-827-12	0.0033 µF		mylar	0.02
C413	1-105-827-12	0.0033 µF		mylar	0.02
C414	1-105-841-12	0.047 µF		mylar	0.02
C415	1-105-821-12	0.001 µF		mylar	0.02
C416	1-105-833-12	0.01 µF		mylar	0.02
C417	1-105-837-12	0.022 µF		mylar	0.02
C418	1-105-827-12	0.0033 µF		mylar	0.02

Resistors

All resistors are 1/4 W, ±5 %, carbon type resistors, unless otherwise noted.

R101	1-201-872	560 Ω	1/8 W	composition	0.02
R102	1-201-864	5.6 kΩ	1/8 W	composition	0.02
R103	1-201-864	5.6 kΩ	1/8 W	composition	0.02
R104	1-201-862	1 kΩ	1/8 W	composition	0.02
R105	1-201-828	2.4 kΩ	1/8 W	composition	0.02
*R106	1-202-019	3.9 kΩ	1/8 W	composition	0.02
	1-201-871	4.3 kΩ	1/8 W	composition	0.02

* Mark to be selected.

Ref. No.	Part No.	Description	Unit Price
R107	1-201-868	100 kΩ 1/8 W composition	$0.02
R108	1-244-449	100 Ω 1/8 W carbon	0.02
R201		- discarded -	
R202	1-244-727	180 kΩ	0.02
R203		- discarded -	
R204	1-244-682	2.4 kΩ	0.02
R205	1-244-665	470 Ω	0.02
R206	1-244-678	1.6 kΩ	0.02
R207	1-244-664	430 Ω	0.02
R208	1-244-665	470 Ω	0.02
R209	1-244-642	51 Ω	0.02
R210	1-244-713	47 kΩ	0.02
*R301	1-244-721	100 kΩ	0.02
	1-244-722	110 kΩ	0.02
	1-244-723	120 kΩ	0.02
	1-244-724	130 kΩ	0.02
	1-244-725	150 kΩ	0.02
R302		- discarded -	
R303	1-244-697	10 kΩ	0.02
R304	1-244-673	1 kΩ	0.02
R305		- discarded -	
R306		- discarded -	
R307	1-244-715	56 kΩ	0.02
*R308	1-244-710	36 kΩ	0.02
	1-244-711	39 kΩ	0.02
	1-244-712	43 kΩ	0.02
	1-244-713	47 kΩ	0.02
	1-244-714	51 kΩ	0.02
R309	1-244-660	300 Ω	0.02
R310	1-244-694	7.5 kΩ	0.02
R311	1-244-673	1 kΩ	0.02
R312	1-244-697	10 kΩ	0.02
R313	1-244-677	1.5 kΩ	0.02
R314	1-244-725	150 kΩ	0.02
R315	1-244-657	220 Ω	0.02
R316	1-244-697	10 kΩ	0.02
R317	1-244-673	1 kΩ	0.02
R318	1-244-673	1 kΩ	0.02
R319	1-244-680	2 kΩ	0.02
R320	1-244-691	5.6 kΩ	0.02
R321	1-244-691	5.6 kΩ	0.02

* Mark to be selected.

Ref. No.	Part No.	Description	Unit Price
R322	1-244-725	150 kΩ	$0.02
R323	1-244-673	1 kΩ	0.02
R324		- discarded -	
R325		- discarded -	
R326	1-244-690	5.1 kΩ	0.02
R327	1-244-680	2 kΩ	0.02
R328	1-244-673	1 kΩ	0.02
R329	1-244-649	100 Ω	0.02
R401	1-244-681	2.2 kΩ	0.02
R402	1-244-715	56 kΩ	0.02
R403	1-222-805-21	50 kΩ variable, volume control	0.12
R404	1-244-691	5.6 kΩ	0.02
R405	1-244-632	20 Ω	0.02
R406	1-244-673	1 kΩ	0.02
R407	1-244-705	22 kΩ	0.02
R408	1-244-619	5.6 Ω	0.02
R409	1-244-651	120 Ω	0.02
R410	1-244-682	2.4 kΩ	0.02
R411	1-244-651	120 Ω	0.02
R412	1-244-601	1 Ω	0.02
R413		- discarded -	
R414	1-244-690	5.1 kΩ	0.02
R415	1-244-697	10 kΩ	0.02
R416	1-244-697	10 kΩ	0.02
R417	1-244-684	3 kΩ	0.02
R418	1-244-680	2 kΩ	0.02
		Miscellaneous	
	1-581-471-12	Printed Circuit Board, fm tuner	0.03
	1-538-522-12	Printed Circuit Board, CP	0.09
	1-538-521-17	Printed Circuit Board, i-f	0.05
	1-581-021-11	Printed Circuit Board, af	0.13
TEL ANT	1-501-046-15S	Antenna, telescopic	0.61
SP	1-502-118-12	Speaker, 8 Ω	0.52
DL	1-518-095-12	Lamp, dial scale	0.08
J1	1-507-169-13	Jack, MPX OUT	0.05
J2	1-507-169-13	Jack, AUX IN	0.05
J3	1-507-169-13	Jack, rec out	0.05
J4	1-507-169-13	Jack, earphone	0.05

Ref. No.	Part No.	Description	Unit Price
J5	1-507-127-12	Jack, EXT POWER IN	$0.11
	1-507-901-12	Nut, jack	0.01
(S1(1-2) – S4(1-2)	1-514-262	4-Key Switch, band select	0.56
(S1(3-6) – S3(3-6)	1-513-302	4-Circuit Switch, band select	0.21
S4(3-8)	1-513-239	6-Circuit Switch, band select	0.26
S5, S6	1-514-261	Switch, LIGHT (S5) and POWER (S6)	0.40
S7	1-513-222-21	Switch, TONE	0.10
S8	1-513-222-21	Switch, AFC	0.10

D. ATTACHED ITEMS

3-995-567-31	Instruction Manual	0.17
3-998-901	Tag, serial No.	0.01
X-44900-02	Polishing Cloth	0.02
3-701-251	Polyethylene Bag	0.01
1-504-034-12	Earphone, ME-20	0.15
3-816-719	Case, earphone	0.03
3-823-936	Case, carrying	1.06
X-38137-06-2	Shoulder Strap Ass'y	0.07
3-823-941-11	Carton, packing	0.11
3-823-940	Cushion, styrofoam	0.08